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GENERAL COUNSEL

January 6, 2005

Mr. Charles L.A. Terreni
Chief Clerk/Administrator
South Carolina Public Service Commission
101 Executive Center Dr., Suite 100
Columbia, SC 29210

Re: Application of Bush River Utilities, Inc. for an approval of New Schedule of Rates and Charges for Sewage Service provided Residential and Commercial customers in all areas served.
PSC Docket No.: 2004-259-S

Dear Charles:

Enclosed for filing please find twenty-six copies of direct testimony for the following Office of Regulatory Staff witnesses: Dawn Hipp, Willie Morgan, and Roy Barnette. Please date stamp the extra copy enclosed and return it to me via person delivery same.

Please let me know if you have any questions.

Sincerely,

Benjamin P. Mustian

BM/cc
Enclosures

cc: Charles Cook, Esquire

BEFORE
THE PUBLIC SERVICE COMMISSION
OF SOUTH CAROLINA
DOCKET NO. 2004-259-S

RECEIVED
2005 JAN -6 PM 4:44
SOUTH CAROLINA
PUBLIC SERVICE COMMISSION

IN RE: Application of BUSH RIVER)
UTILITIES, INC. for Approval of)
New Schedule of Rates and Charges)
For Sewage Service Provided to)
Residential, Commercial and)
Wholesale Customers in all areas)
Served.)

CERTIFICATE OF SERVICE

This is to certify that I, Cindy Clary, an employee with the Office of Regulatory Staff, have this date served one (1) copy of the Direct Testimony and Exhibits of: Dawn M. Hipp, Willie J. Morgan, and Roy Barnette in the above-referenced matter to the person(s) named below by causing said copy to be deposited in the United States Postal Service, first class postage prepaid and affixed thereto, and addressed as shown below:

Charles Cook, Esquire
Elliott & Elliott, P.A.
721 Olive Street
Columbia, South Carolina 29205


Cindy Clary

January 6, 2005
Columbia, South Carolina

**THE OFFICE OF REGULATORY STAFF
DIRECT TESTIMONY AND EXHIBITS
OF
WILLIE J. MORGAN**



CONFIDENTIAL
2005-03-23 10:46
CONFIDENTIAL

TURN DATE: OK DW
SERVICE: OK DW

**DOCKET NO. 2004-259-S
BUSH RIVER UTILITIES, INC.
APPLICATION FOR RATE INCREASE
TEST YEAR ENDED DECEMBER 31, 2003**

TESTIMONY OF WILLIE J. MORGAN

FOR

THE OFFICE OF REGULATORY STAFF

DOCKET NO. 2004-259-S

IN RE: BUSH RIVER UTILITIES, INC.

Q. PLEASE STATE YOUR NAME, BUSINESS ADDRESS AND OCCUPATION.

A. My name is Willie J. Morgan, and my business address is 1441 Main Street, Suite 300, Columbia, South Carolina 29201. I am employed by the State of South Carolina, Office of Regulatory Staff ("ORS") as the Program Manager for the Water and Wastewater Department.

Q. PLEASE STATE YOUR EDUCATIONAL BACKGROUND AND EXPERIENCE.

A. I received a Bachelor of Science Degree in Engineering from the University of South Carolina in 1985 and a Master of Arts Degree in Management from Webster University in 2000. I am a licensed Professional Engineer registered in the State of South Carolina. After graduating from the University of South Carolina, I was employed by the South Carolina Department of Health and Environmental Control ("DHEC") as an Environmental Engineer Associate.

1 Later, I was promoted to the position of Permitting Liaison where I assisted
2 industries and the public with environmental permitting requirements in the State
3 of South Carolina. This assistance included providing information about air
4 quality, solid and hazardous waste management, and water and wastewater
5 management requirements. I was employed by DHEC for nineteen years. On
6 October 2, 2004, I joined the ORS as the Program Manager for the Water and
7 Wastewater Department.

8 **Q. WHAT IS THE PURPOSE OF YOUR TESTIMONY INVOLVING BUSH**
9 **RIVER UTILITIES, INC. FOR THIS PROCEEDING?**

10 A. The purpose of my testimony is to set forth my findings and the ORS staff's
11 findings relative to the determination of the amount of additional operating
12 revenues that would result from the implementation of the schedules of rates and
13 charges proposed by Bush River Utilities, Inc. ("BRUI"). Specifically, I will
14 focus on the facility's engineering and planned construction activities,
15 environmental compliance issues, 208 Plan relationship, depreciation, and source
16 water protection obligation.

17 **Q. ARE YOUR FINDINGS AND THE ORS STAFF'S FINDINGS SET FORTH**
18 **IN YOUR TESTIMONY AND ATTACHED EXHIBITS?**

19 A. Yes they are.

20 **Q. PLEASE EXPLAIN HOW YOU COMPILED INFORMATION FOR YOUR**
21 **REVIEW.**

22 A. I used information provided by BRUI in its application and information gathered
23 through on-site visits. I further consulted with and used information from DHEC,

1 wastewater treatment facility vendors, the National Association of Regulatory
2 Utility Commissioners ("NARUC"), and the Central Midlands Council of
3 Governments ("COG"). Using this information, ORS staff determined the amount
4 of additional operating revenues that would be produced by the proposed rates.
5 Also, we were able to obtain a better understanding of BRUI's system design
6 structure, utility needs, and environmental compliance issues.

7 **Q. PLEASE EXPLAIN EXHIBIT WJM-1 OF YOUR REPORT.**

8 A. Exhibit WJM-1, consisting of one page, is a copy of the plant flow schematic of
9 the proposed upgrade to the BRUI treatment system. BRUI has only commercial
10 customers, except for Development Service, Inc. ("DSI") which is a wholesale
11 customer, from which it collects wastewater. This wastewater is currently treated
12 at an existing biological treatment system that is owned and operated by BRUI.
13 BRUI discharges the treated wastewater into the lower Saluda River. The
14 proposed wastewater treatment facility ("WWTF") at BRUI will continue to
15 discharge its effluent to the Saluda River at a maximum design flow rate of
16 400,000 gallons per day. The maximum design flow rate for BRUI will not
17 change with the proposed upgrade.

18 **Q. PLEASE EXPLAIN EXHIBIT WJM-2 OF YOUR REPORT.**

19 A. Exhibit WJM-2 is the depreciation schedule for the assets obtained or owned by
20 BRUI during the 2003 test year. The Skid Steer Loader, however, was traded in
21 for the purchase of the Case Bobcat in 1999. The Screen USA is no longer an
22 asset to be depreciated by BRUI because the unit is no longer owned by BRUI.

23 **Q. PLEASE EXPLAIN THE MAJOR ASSETS ASSOCIATED WITH BRUI.**

1 A. BRUI's major assets include its wastewater collection lines, wastewater treatment
2 facility, sludge press system, a pick-up truck, bull dozer, bobcat, and a vactor
3 (sewage cleanup equipment). Several additional items are used by BRUI, but
4 were purchased by another utility. These items include a chemical sprayer,
5 another pick-up truck, and a backhoe. The truck and the backhoe are used by all
6 three wastewater management companies owned by Keith Parnell and Charles K.
7 Parnell - BRUI, DSI, and Midlands Utility, Inc. ("MUI"). The chemical sprayer,
8 while paid for by DSI, is being used solely at the BRUI treatment facility.

9 **Q. WHAT SERVICE LIFE DO YOU ATTRIBUTE TO THESE ASSETS?**

10 A. The service life should be based on the useful life of a piece of equipment and
11 should not be related to a financing period. In a prior Order, the Commission
12 rejected a proposal by DSI and BRUI for an accelerated plant depreciation of 20
13 years and instead allowed the BRUI utility plant to be depreciated over a 50-year
14 life period. See, Commission Order No. 96-44 (January 19, 1996), Docket No.
15 94-727-S – Application of Development Service, Inc. for Approval of an Increase
16 in Rates and Charges for Sewer Service and Docket No. 94-728-S – Application
17 of Bush River Utilities, Inc. for Approval of an Increase in Rates and Charges for
18 Sewer Service. BRUI has again proposed to change the existing depreciation for
19 its WWTF to a 20-year life period. BRUI requests that the sewer lines be
20 changed to a 15-year service life period. We recommend that the sewer lines be
21 capitalized and depreciated over a 45-year period. BRUI also suggests that the
22 proposed upgrades to the WWTF be depreciated over a service life period of 25
23 years. ORS recommends that the existing WWTF cost be capitalized and

1 depreciated over 32 years and also that any new WWTF cost be capitalized and
2 depreciated over a 32-year period. These recommendations are based on the
3 conclusions outlined in the Florida Public Service Commission Water and
4 Wastewater System Regulatory Law as recommended by the NARUC staff.

5 **Q. PLEASE EXPLAIN EXHIBIT WJM-3 OF YOUR REPORT.**

6 A. Exhibit WJM-3, consisting of two pages, sets forth a summary of the wastewater
7 system inspection by ORS. BRUI currently provides adequate wastewater
8 collection service to its commercial customers and DSI. No observed deficiencies
9 were noted during the system inspection of the collection portion of the BRUI
10 facility. In addition, there is neither construction activity being proposed by
11 BRUI for its collection portion of its system nor is there an immediate need for an
12 upgrade or reconstruction of the collection portion of the system. However, an
13 inspection of the treatment portion of the system that discharges treated
14 wastewater into the lower Saluda River revealed the following deficiencies:

- 15 1. Debris was accumulating around the outside of the fenced treatment
16 area. Specifically, debris was allowed to accumulate around the
17 container being used to collect debris waste from the manual bar
18 screen.
- 19 2. An unacceptable amount of sludge was accumulating in the treatment
20 lagoon. The sludge level was such that there was plant growth along
21 the floating divider within the lagoon. Accumulated sludge can affect
22 the treatment system capacity and the ability of the system to properly

1 treat the wastewater. Thus, accumulated sludge could be a factor the
2 treatment system being unable to meet its NPDES limits in its permit.

3 3. Deep potholes exist near the entrance to the wastewater treatment
4 system behind the old Bush River Mall.

5 4. The dikes surrounding the lagoon system need repairing.

6 5. Algae and/or solids were located in the containment area used to
7 chlorinate or disinfect the wastewater prior to discharge into the
8 Saluda River.

9 6. Some discoloration of the final wastewater discharge was observed
10 during the site inspection.

11 **Q. PLEASE EXPLAIN EXHIBIT WJM-4 OF YOUR REPORT.**

12 A. BRUI's existing treatment system is currently having difficulty meeting the limits
13 in its National Pollutant Discharge Elimination System ("NPDES") permit.
14 Exhibit WJM-4, consisting of pages one through seven, is a copy of the initial
15 design for BRUI replacement WWTF. These plans have been revised by BRUI
16 because of some concerns by DHEC; however, ORS has not yet received an
17 updated copy of the revised plans.

18 **Q. PLEASE EXPLAIN THE DHEC VIOLATIONS ASSOCIATED WITH**
19 **BRUI'S WASTEWATER TREATMENT FACILITY.**

20 A. As noted in Exhibit WJM-5, consisting of pages one through six, DHEC revealed
21 that BRUI violated several of its rules and regulations. These included violations
22 of the permitted discharge limits in BRUI's permit (SC0032743) for biochemical
23 oxygen demand, dissolved oxygen, fecal coliform bacteria and pH.

1 **Q. PLEASE EXPLAIN THE UPGRADES BRUI PROPOSES TO MAKE TO**
2 **ITS FACILITY.**

3 In an effort to achieve compliance with the DHEC Consent Order (03-049-W) and
4 to consistently meet the limits in its NPDES permit, BRUI indicated that it
5 explored multiple options, including connecting to regional facilities and system
6 upgrades. BRUI stated that it attempted to negotiate connection to two different
7 regional sewer providers including the City of Columbia, which is the designated
8 208 regional provider of sewer. The other interconnection option was a tie-in to
9 West Columbia's wastewater collection system. A complete cost analysis should
10 have been reviewed to determine the best alternative relative to interconnecting to
11 the existing available sewer providers in the area versus upgrading the BRUI
12 WWTF. To determine the best alternative relative to the cost impact on the
13 customers of BRUI, all options should have been explored in detail. However, no
14 cost analyses were produced by BRUI; therefore, ORS is unable to conclude that
15 the proposed upgrades are the best option for BRUI or its customers.

16 Following what BRUI described as failed negotiation efforts, BRUI proposed to
17 upgrade its existing wastewater treatment facility with a replacement facility.
18 BRUI obtained the appropriate approval from DHEC in a construction permit
19 issued on November 29, 2004. As part of the DHEC approval process,
20 conformance with the Water Quality Management Plan for the Central Midlands
21 region was assessed. The proposed wastewater treatment system which includes a
22 screening unit, aerobic digester, dual aeration basins, equalization basin, and a
23 disinfection unit could assist BRUI in meeting the NPDES permit limits.

1 The disinfection unit to be installed is an Ultraviolet (“UV”) disinfection type
2 system. While this type of disinfection system could be effective, it is imperative
3 that BRUI properly maintain the treatment process and control the level of its
4 total suspended solids (“TSS”) in its wastewater that pass through the unit. As
5 noted on Exhibit WJM-3, BRUI is not properly controlling its sludge build-up in
6 the treatment lagoon for its current treatment facility. Improved wastewater
7 treatment management practices must be implemented in order for BRUI to
8 comply with its NPDES permit. Because of concerns related to the current
9 management practices, I am apprehensive about whether BRUI should be allowed
10 to expend revenue generated from customers on a system that requires efforts to
11 remove such high levels of solids considering this issue has been observed as a
12 continuing problem (See, Exhibit WJM-6). An alternative disinfection method
13 would be the use of a chlorination system similar to the existing disinfection unit.
14 This is a proven method that is utilized by most WWTFs in South Carolina and
15 may be less costly to construct and operate for BRUI. A chlorination and
16 dechlorination system is more flexible and can be adjusted or modified more easily
17 to meet the needs of the overall WWTF. BRUI has provided no cost comparisons
18 of different options; therefore, no cost analysis of any options has been conducted.
19 The Sequential Batch Reactors (“SBRs”), while slightly oversized, could translate
20 into a small savings to the customers of BRUI and DSI. Additional maintenance
21 obligations will be required for the upgraded facility due to the use of a pump
22 station versus an all gravity flow system that is currently being used.

23 **Q. PLEASE EXPLAIN EXHIBIT WJM-7 OF YOUR REPORT.**

1 A. Exhibit WJM-7, consisting of one page, is a copy of the projected cost outlay for
2 the proposed construction work for upgrading BRUI to meet environmental
3 compliance requirements as required by the NPDES permit. The proposed
4 construction work for the replacement wastewater treatment facility at BRUI is
5 projected to cost approximately \$932,000. Part of the construction cost is
6 attributed to the treatment facility's discharge point proximity to a source water
7 protection area. Therefore, BRUI must establish and implement Class I reliability
8 standards for its proposed construction activity. Considering its system design
9 type, BRUI must provide backup power, added influent storage, duplicate debris
10 cleaning mechanism, back-up aeration blowers, and a duplicate pumping system.
11 While the proposed construction activity at BRUI will benefit BRUI's customers,
12 DSI's customers will also receive indirect benefits by having its wastewater
13 treated by an upgraded system. However, since BRUI and MUI are not
14 physically interconnected, the proposed upgrade to BRUI's WWTF will not
15 provide any benefits to the customers of MUI facilities located in Fairfield,
16 Lexington, Richland, and Orangeburg Counties, nor will any construction work at
17 MUI provide a benefit to BRUI's customers.

18 **Q. DO YOU HAVE ANY ADDITIONAL RECOMMENDATIONS?**

19 A. In a prior Order, the Commission encouraged DSI, BRUI and MUI to review and
20 explore the possibilities of merging into one company. See, Commission Order
21 No. 96-44 (January 19, 1996), Docket No. 94-727-S – Application of
22 Development Service, Inc. for Approval of an Increase in Rates and Charges for
23 Sewer Service and Docket No. 94-728-S – Application of Bush River Utilities,

1 Inc. for Approval of an Increase in Rates and Charges for Sewer Service. BRUI
2 in its current application for a rate increase, Docket 2004-259-S, submits that the
3 long term business plan of its owners is to effect a merger of all assets and
4 liabilities of the three corporations into one corporation. To date, ORS has not
5 received any written information about a merger that has taken place or any
6 information about the initiation of a merger between the three companies. The
7 merger of the companies would further benefit the customers of all three
8 companies by reducing the total amount of the performance bond as required by
9 S.C. Code Ann. Section 58-5-720 and 26 S.C. Code Regs. 103-512.3.1 and
10 require only one performance bond instead of a performance bond for each
11 company (DSI, BRUI and MUI). Other issues that support merging the
12 companies include a reduced management and administrative cost for the
13 operation of the three companies. ORS strongly recommends the three companies
14 merge to form one company.

15 In addition, BRUI should explore the potential use of the state's tax credit for
16 pollution control equipment (See, S.C. Code Ann. Section 12-37-220(A)) and the
17 state's tax credit for the construction or improvement of an infrastructure (See,
18 S.C. Code Ann. Section 12-6-3420). Use of these tax credits could help to reduce
19 the overall cost of any upgrade to BRUI, thus reducing the burden of new
20 construction on BRUI's customers.

21 Further, potential cost savings may be obtained by utilizing an open bidding
22 process to allow multiple vendors to submit proposals for upgrading the BRUI
23 WWTF. BRUI should not rely solely on the consulting firm of Mr. Charles K.

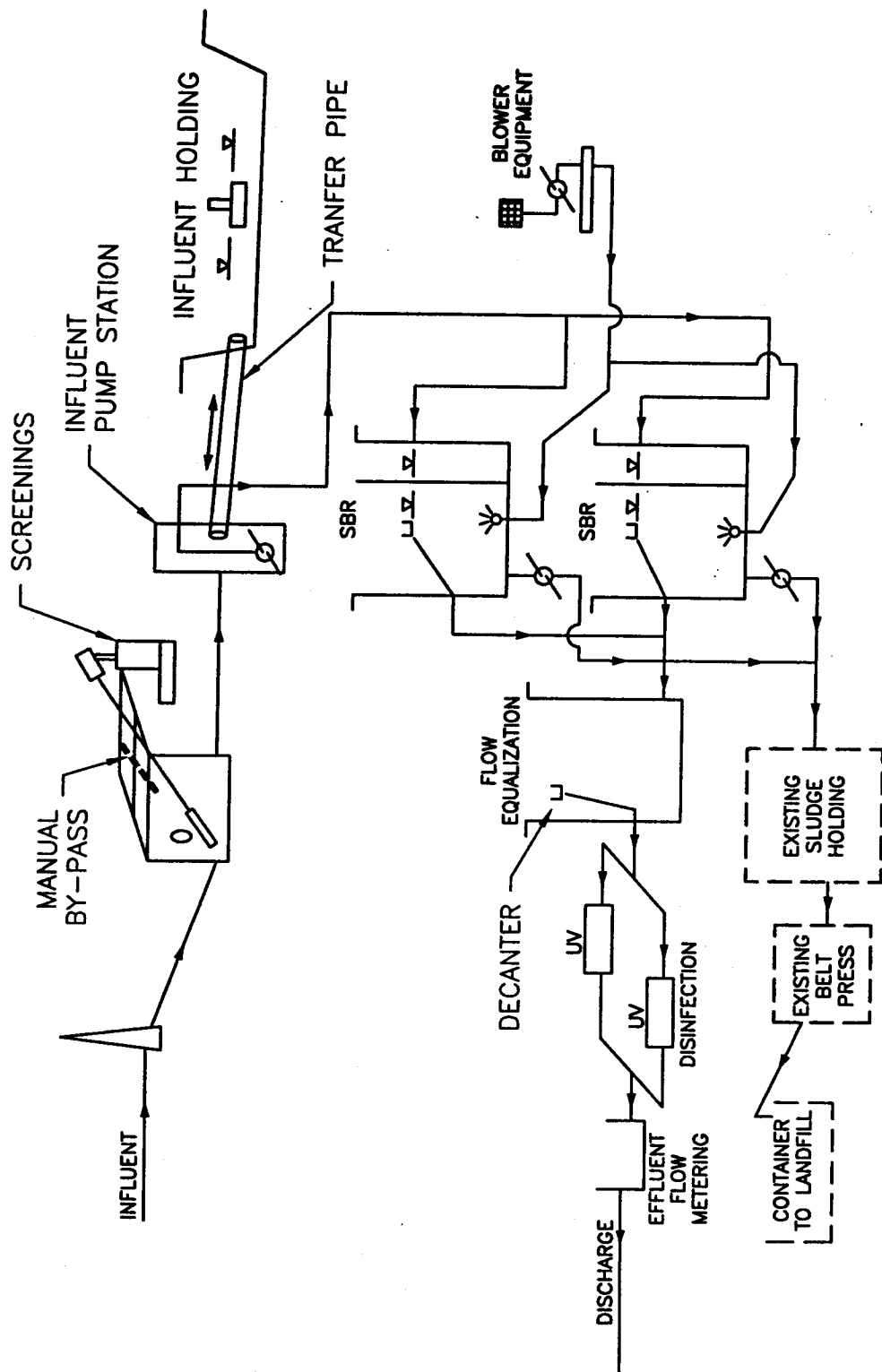
1 Parnell, HPG and Company, and a single proposal for addressing the needs of its
2 WWTF upgrade. Multiple options should be considered from other capable
3 contractors and vendors who are not affiliated with BRUI before agreeing on a
4 proposal.

5 **Q. DOES THAT CONCLUDE YOUR TESTIMONY?**

6 **A.** Yes it does.

DIRECT EXHIBITS
OF
WILLIE J. MORGAN

DOCKET NO. 2004-259-S
BUSH RIVER UTILITIES, INC.
APPLICATION FOR RATE INCREASE
TEST YEAR ENDED DECEMBER 31, 2003



PLANT FLOW SCHEMATIC **BUSH RIVER WASTEWATER TREATMENT FACILITY**

NOT TO SCALE

MIDLANDS UTILITY
 WATER & SEWER AUTHORITY

WASTEWATER TREATMENT PLANT
 FACILITY UPGRADES

APPROVED BY: CKP DATE: 051403

SCALE: NONE REVISED:

DRAWING NO: 01043

BUSH RIVER UTILITIES, INC
DEPRECIATION EXPENSE ADJUSTMENT
FOR THE TEST YEAR ENDED DECEMBER 31, 2003

| Date Acquired | Description | Allocation of | | Service Life | Recomm. By W/W | | Depr. Expense | Accum. Depreciation |
|-----------------------|--|------------------|-----------|-----------------|-------------------|---|------------------|------------------------|
| | | Amount | Equipment | | Rate | % | | |
| | | \$ | \$ | # | | | \$ | \$ |
| Jan-79 | Sewer System - Net (FL#354) | 135,512 | 100.00% | 32 | 3.13 | | | |
| Jan-84 | Sewer Addition (FL#354) | 32,458 | 100.00% | 32 | 3.13 | | | |
| Dec-85 | Sewer Addition (FL#354) | 13,043 | 100.00% | 32 | 3.13 | | | |
| Apr-86 | Sewer Line - Hwy DE (FL#361) | 38,400 | 100.00% | 45 | 2.22 | | | |
| Aug-86 | Sewer Line (FL#361) | 5,078 | 100.00% | 45 | 2.22 | | | |
| Dec-87 | Man Hole (FL#361) | 1,350 | 100.00% | 30 | 3.33 | | | |
| Apr-88 | Man Hole (FL#361) | 1,400 | 100.00% | 30 | 3.33 | | | |
| Jun-89 | Aerator Float (FL#380) | 6,691 | 100.00% | 18 | 5.56 | | | |
| Oct-90 | Fully Depreciated | 96,418 | 100.00% | FD | FD | | | |
| Jan-96 | Belt Press (FL#380) | 45,000 | 100.00% | 18 | 5.56 | | | |
| Sep-96 | Skid Steer Loader (FL#395) traded on Case Bobcat | 19,302 | 100.00% | 12 | N/A | | | |
| Dec-96 | Screen USA (FL#389) gone | 24,300 | 100.00% | 18 | N/A | | | |
| Apr-97 | 1997 Dodge Truck (FL#391) | 16,172 | 100.00% | 6 | 16.67 | | | |
| Jun-97 | Case Bull Dozier (FL#395) | 39,222 | 100.00% | 12 | 8.33 | | | |
| Jan-99 | Case Bobcat (FL#395) | 30,457 | 100.00% | 12 | 8.33 | | | |
| Sep-01 | Vactor (FL#395) | 15,275 | 100.00% | 12 | 8.33 | | | |
| Sep-01 | Vactor - Sec. 179 (FL#395) | 20,000 | 100.00% | 12 | 8.33 | | | |
| | Totals | 540,078 | | | | | - | |
| Reclassified by Staff | | | | | | | | |
| Aug-03 | 1000 Ft. 6" SDR26 IPS HDPE Pipe (FL#361) | 9,576 | 100% | 45 | 2.22 | | | |
| Aug-03 | 4x6 PVC Inserta Tee (FL#389) | 2,692 | 100% | 18 | 5.56 | | | |
| Oct-03 | CAT Backhoe (25% used by BRUI) (FL#395) | 53,550 | 25% | 12 | 8.33 | | | |
| Oct-03 | Truck - Ford F250 (1/3 used by BRUI) (FL#391) | 23,249 | 33% | 6 | 16.67 | | | |
| Oct-03 | Chemical Sprayer (100% used by BRUI) (FL#380) | 580 | 100% | 10 | 10.00 | | | |
| | Total Plant In Service | 629,725 | | | | | - | |

FD = Fully Depreciated

G = 100%/F



WASTEWATER SYSTEM INSPECTION

Utility Name: **Bush River Utilities, Inc.** Number of Customers: **35**

System Type: **Collection and Treatment System** Date Inspected: **11/23/04**

Inspected By: **Willie Morgan/Dawn Hipp - Office of Regulatory Staff**

Company Representative: **Keith Parnell**

Type of Plant: **Collection and Biological Treatment System**

Extent of Treatment: **Biological Treatment with Surface Water Discharge using NPDES permit (SC0032743)**

| System Components Inspected | Yes | No |
|---|--------------------|----|
| Chlorinator | X | |
| Other Chemicals in Use | | X |
| Aerators | X | |
| Plant fenced and Locked | X | |
| Warning Signs Visible | X | |
| Holes in Fence | | X |
| Erosion of Dikes | X | |
| Odor | | X |
| Grass Cut | X | |
| Duck Weed or Algae | X | |
| Grease Build Up | | X |
| Debris inside of Plant ^{1, 2} | | X |
| Color of Effluent: | Clear - bit cloudy | |
| Lift Stations: Number Not Applicable | | X |
| Failure Warning System | NA | NA |
| Electric Wiring Acceptable | NA | NA |
| Overflows | | X |
| Condition of Access Road: Good/Fair/Bad | Fair ³ | |
| New Construction | | X |

Frequency Checked by Licensed WWTF Operator: **1/day; 365 days/year**

Location of Utility Office: **816 East Main Street, Lexington, SC 29072**

Location of System: **Collection and Treatment System located in Richland County and Lexington County servicing an area around old Bush River Mall, Columbia, SC**

Subdivision provided water by this Utility: **No**

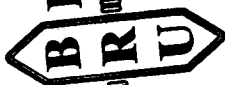
Comments: This is a collection and treatment system that collects wastewater from commercial customers including Development Service, Inc. and treats the wastewater prior to discharge into the lower Saluda River.

Footnotes:

1. Debris was being accumulated around the outside of the fenced treatment area. Specifically, debris was allowed to accumulate around the container being used to collect debris waste from the manual bar screen.
2. An unacceptable amount of sludge was being accumulated in the treatment lagoon. The sludge was allowed to accumulate to a level such that plant growth had initiated along the floating divider within the lagoon. The accumulated sludge can have an affect on the treatment system capacity and its ability to properly treat the wastewater. Thus, the treatment system would be unable to meet its NPDES limits in its permit.
3. Deep potholes existed near the entrance to the treatment system behind the old Bush River Mall.

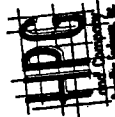
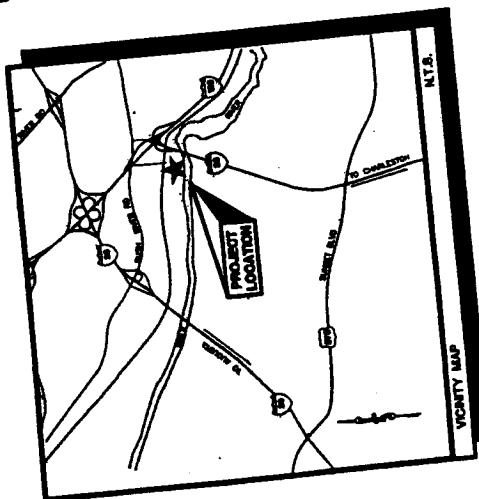
BUSH RIVER UTILITY REPLACEMENT WASTEWATER TREATMENT PLANT

B BUSH RIVER UTILITY, INC.

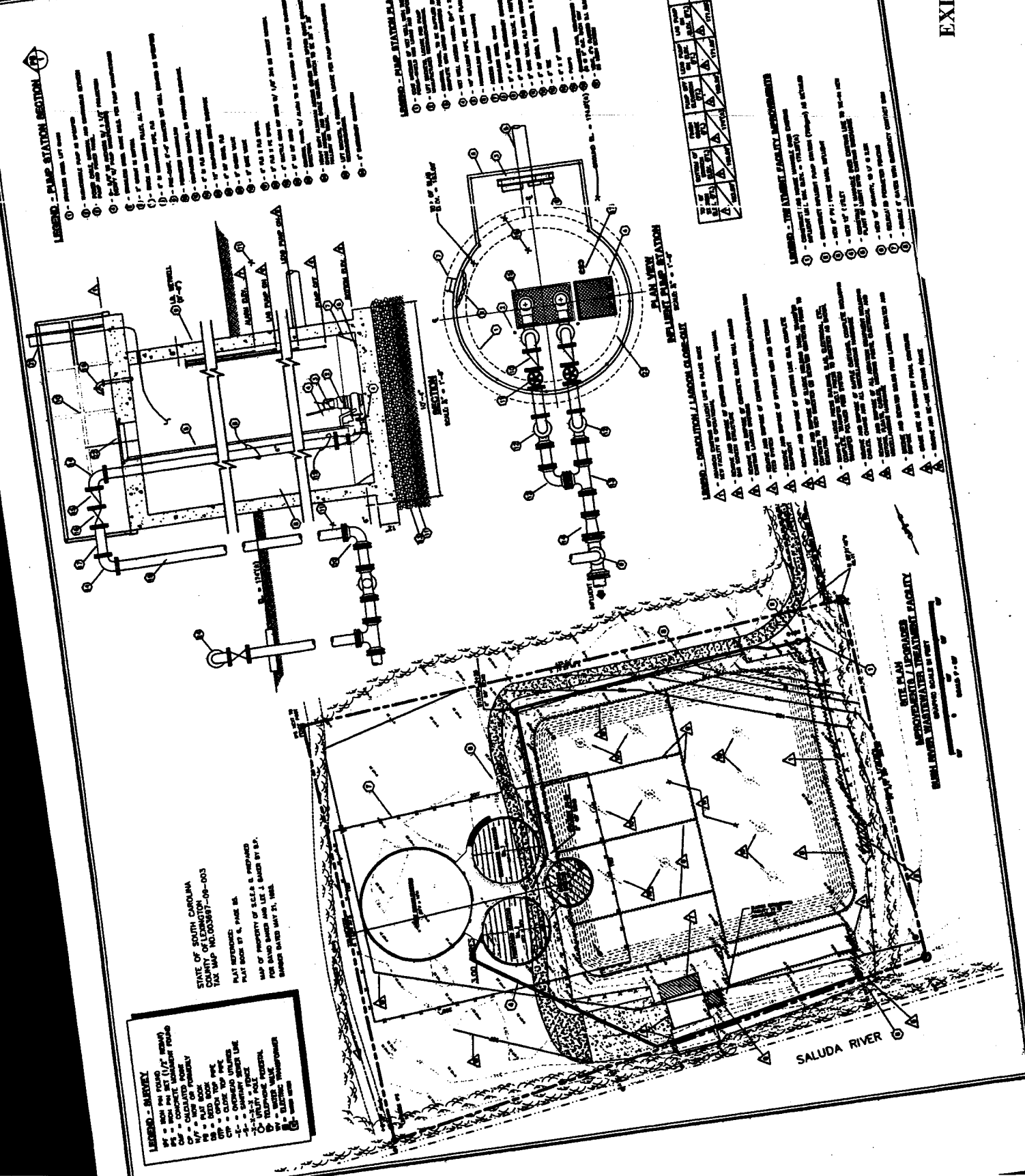


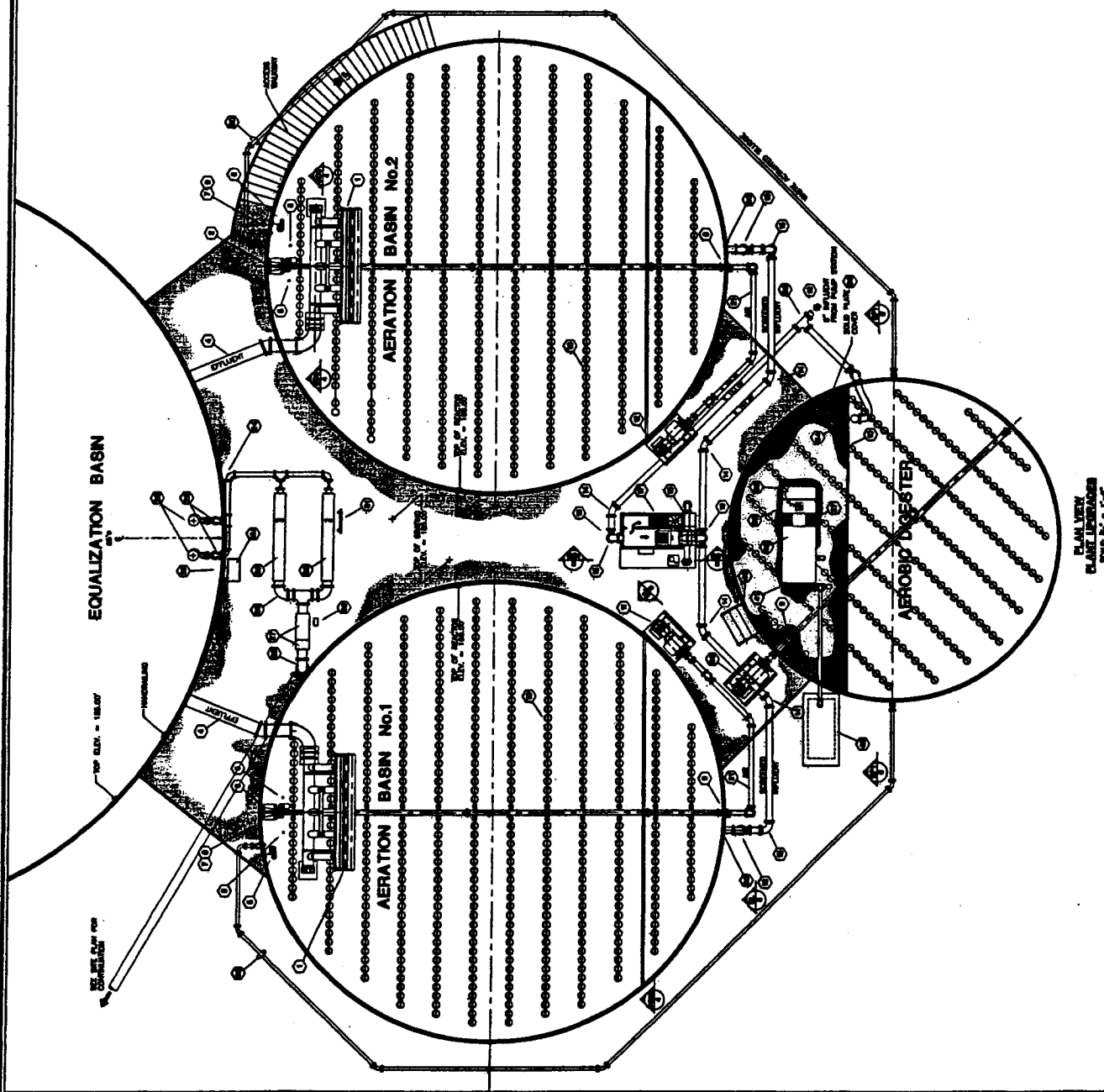
**HPG PROJECT No. 01043
APRIL 2004**

| SHEET INDEX | |
|-------------|--|
| SHEET | DESCRIPTION |
| 1 | SITE PLAN, PLANT DEMOLITION AND LAGOON CLOSE-OUT |
| 2 | PLAN VIEW, NEW TREATMENT FACILITY |
| 3 | PLAN VIEW, NEW REACTOR AND BLOWER EQUIPMENT |
| 4 | INFLUENT BAR SCREEN AND MISCELLANEOUS DETAILS |
| 5 | NEW REACTOR B. 1000' AND MISCELLANEOUS DETAILS |
| 6 | EFFLUENT TRUNK LINE PUMPS AND UV DISINFECTION |
| 7 | ASPHALT DRIVE IN AND SLUDGE HANDLING |
| 8 | ELECTRICAL SITE PLAN, POWER WIRING DIAGRAM AND DETAILS |



1432 SUNSET BLVD. W. WEST COLUMBIA, S.C. 29709 • (803) 739-2000 • FAX (803) 739-2277

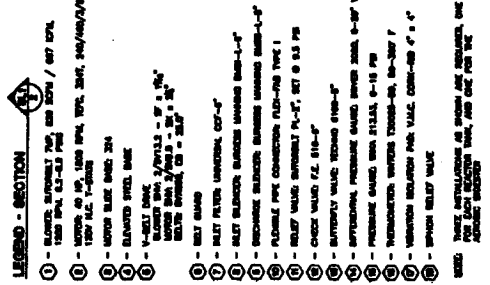


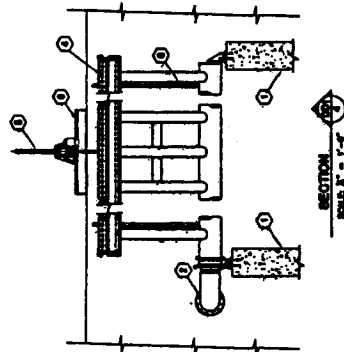


LEGEND - PLAN VIEW - SBR SYSTEM

- 1 - RECTANGULAR WEIR, 12'-0"
- 2 - RECTANGULAR AIRLIFT
- 3 - SPRAWL PUMP
- 4 - 12" EFFLUENT PUMP REACTOR BARGE TO PUMP STATION
- 5 - LEVEL TRANSDUCER
- 6 - WEIR BLADE PUMP
- 7 - PUMP MOTOR
- 8 - PUMP MOTOR MOUNTING
- 9 - AIR CONTROL VALVE (ELECTRONIC ACTUATED)
- 10 - FINE BUBBLE AERATION SYSTEM
- 11 - BLUNDER (4000) - 3000 IN.
- 12 - BLUNDER (4000) - 3000 IN.
- 13 - 12" EFFLUENT PUMP PUMP STATION
- 14 - 12" AIR PUMP
- 15 - 12" AIR PUMP
- 16 - 12" AIR PUMP
- 17 - MECHANICAL AIR SUPPLY SYSTEM WITH JACOBI BLUNDER
- 18 - MECHANICAL AIR SUPPLY SYSTEM WITH JACOBI BLUNDER
- 19 - MECHANICAL AIR SUPPLY SYSTEM WITH JACOBI BLUNDER
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PLAN VIEW
CLIMATE LENSING
SCALE 1" = 1'-0"





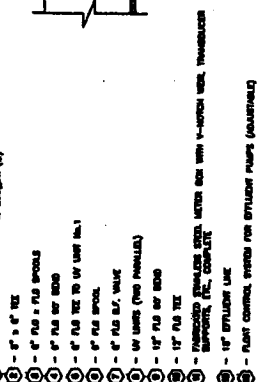
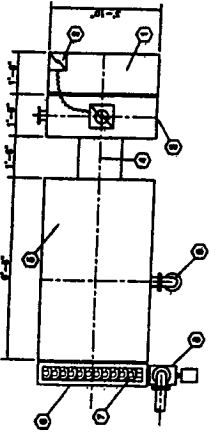


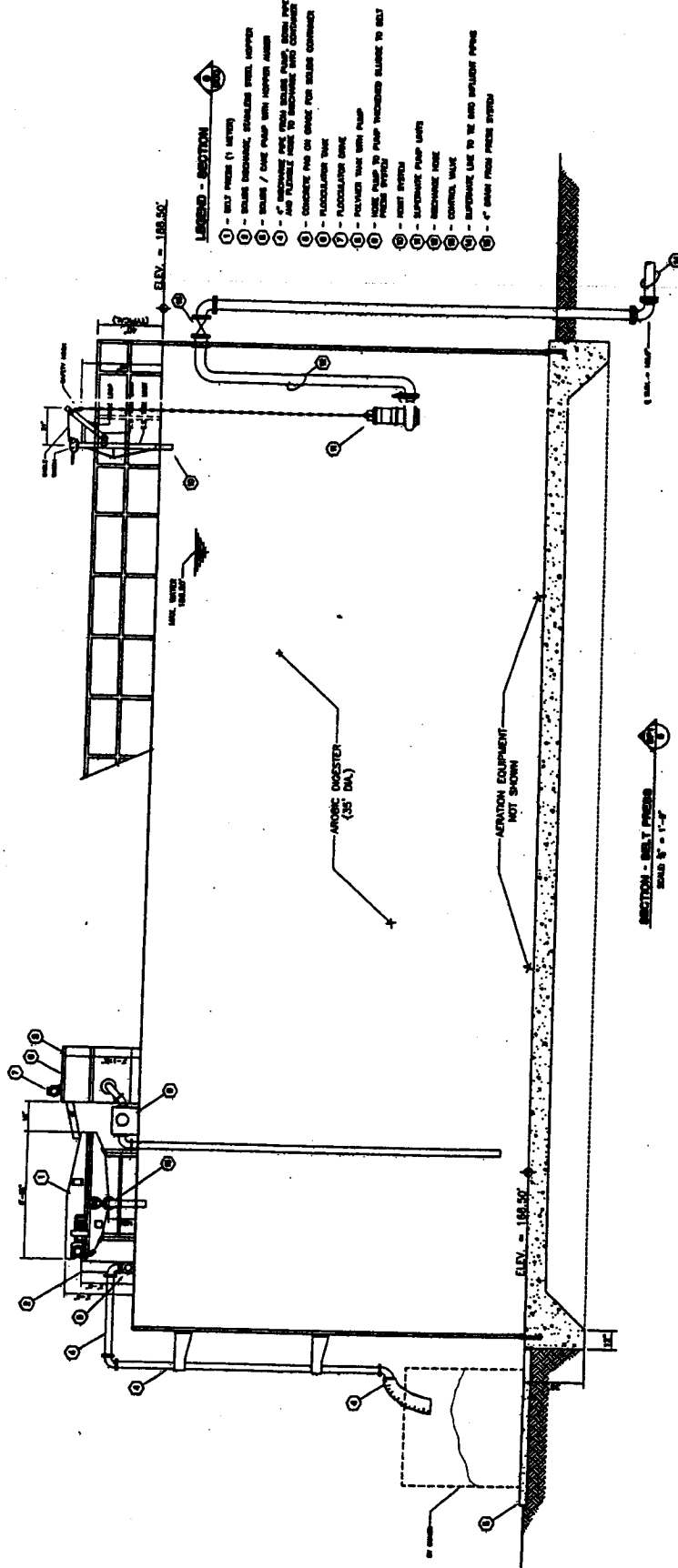
EXHIBIT WJM-4 PAGE 7 OF 7

LEGEND - PLAN VIEW - BELT PRESS

- 1 - PULVER MAKE-UP TANK (TO BE RELOCATED)
- 2 - PULVER MIXING PUMP (TO BE RELOCATED)
- 3 - FLOCCULANT TANK (TO BE RELOCATED)
- 4 - PULVER MAKE-UP TANK (TO BE RELOCATED)
- 5 - 1 METER BELT PRESS (TO BE RELOCATED)
- 6 - BELT PRESS (TO BE RELOCATED)
- 7 - BELT PRESS (TO BE RELOCATED)
- 8 - BELT PRESS (TO BE RELOCATED)
- 9 - 4" DIAM. RETURN TO RECYCLE



PLAN VIEW
BELT PRESS SYSTEM
ROAD 5' - 1'-0"



LEGEND - SECTION

- 1 - BELT PRESS (1 METER)
- 2 - BELT PRESS (1 METER)
- 3 - BELT PRESS (1 METER)
- 4 - BELT PRESS (1 METER)
- 5 - BELT PRESS (1 METER)
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- 17 - BELT PRESS (1 METER)
- 18 - BELT PRESS (1 METER)

SECTION - BELT PRESS
ROAD 5' - 1'-0"

| | | | | | | | |
|---|--|---|--|---|--|--|--|
| PROJECT DESCRIPTION BUSH RIVER WASTEWATER TREATMENT PLANT FACILITY UPGRADES | | OWNER BUSH RIVER COUNTRY LEADSTON | | DATE APRIL 2004 | | SCALE AS SHOWN | |
| LOCATION BUSH RIVER COUNTRY LEADSTON | | DATE APRIL 2004 | | SCALE AS SHOWN | | DRAWING TITLE ANEROIC DIGESTER AND SLUDGE HANDLING | |
| APPROVALS REVISIONS | | APPROVALS LMR | | APPROVALS DATE BY | | REVISIONS DATE BY | |
| SEAL PROFESSIONAL ENGINEER STATE OF ILLINOIS | | SEAL PROFESSIONAL ENGINEER STATE OF ILLINOIS | | SEAL PROFESSIONAL ENGINEER STATE OF ILLINOIS | | SEAL PROFESSIONAL ENGINEER STATE OF ILLINOIS | |

THE STATE OF SOUTH CAROLINA
BEFORE THE DEPARTMENT OF HEALTH AND ENVIRONMENTAL CONTROL

IN RE: BUSH RIVER UTILITIES, INC.
RICHLAND & LEXINGTON COUNTY

CONSENT ORDER
03- 049 -W

Bush River Utilities, Inc. (Respondent) owns and is responsible for the proper operation and maintenance of a wastewater treatment facility (WWTF) serving the residents and businesses of its designated service area located in Richland County and Lexington County, South Carolina.

A review of the Respondent's file by South Carolina Department of Health and Environmental Control (Department) staff revealed that the Respondent violated the Pollution Control Act, S.C. Code Ann. §§ 48-1-10 et seq. (1987 & Supp. 2002) and National Pollutant Discharge Elimination System (NPDES) Permit SC0032743 in that it violated the permitted discharge limits for biochemical oxygen demand (BOD), dissolved oxygen (DO), fecal coliform bacteria (FC) and pH as specified in Part I.A.1 of the NPDES permit.

In accordance with approved procedures and based upon discussions with the Respondent on February 13, 2003, the parties have agreed to the issuance of this Order to include the following Findings of Fact and Conclusions of Law.

In the interest of resolving this matter without delay and expense of litigation the Respondent agrees to the entry of this Consent Order, but neither agrees nor disagrees with the Findings of Fact or the Conclusions of Law; and therefore, agrees that this Order shall be deemed an admission of fact and law only as necessary for enforcement of this Order by the Department or subsequent actions relating to the Respondent by the Department.

FINDINGS OF FACT

1. Department staff issued NPDES permit SC0032743 to the Respondent, allowing it to discharge treated wastewater to the Saluda River in accordance with the effluent limitations, monitoring requirements and other conditions set forth therein.
2. Department staff performed a Compliance Sampling Inspection (CSI) at the Respondent's WWTF between July 29, 2002, and July 31, 2002. Department staff assigned the Respondent's WWTF an overall noncompliance rating due to violations of the permitted discharge limits for DO and FC.
3. The Respondent reported the following violations on discharge monitoring reports during January 1, 2002, through December 31, 2002:
 - BOD – February, March, April, October and December 2002;
 - DO – January, April, May, June and August 2002;
 - FC – April, November and December 2002; and
 - pH – January, November and December 2002.
4. On February 13, 2003, Department staff held a telephone enforcement conference with the Respondent's agent to discuss the above-cited violations. The Respondent's agent stated that the WWTF needs to be upgraded in order to meet the permitted limits. The Respondent's agent has attempted to negotiate connection to two (2) different regional sewer providers, but neither will accept the flow from the WWTF at this time. Department staff and the Respondent's agent discussed the issuance of a Consent Order containing a civil penalty.

CONCLUSIONS OF LAW

Based upon the above Findings of Fact, the Department reaches the following Conclusions of

Law:

1. The Respondent violated the Pollution Control Act, S.C. Code Ann. § 48-1-110(d) (Supp. 2002), and Water Pollution Control Permits, 24 S.C. Code Ann. Regs. 61-9.122.41(a)(1) (Supp. 2002), in that it failed to comply with the permitted discharge limits for BOD, DO, FC and pH as specified in Part I.A.1 of the NPDES permit.
2. The Pollution Control Act, S.C. Code Ann. § 48-1-330 (1987), provides for a civil penalty not to exceed ten thousand dollars (\$10,000.00) per day of violation for any person violating the Act or any rule, regulation, permit, permit condition, final determination, or Order of the Department.

NOW, THEREFORE, IT IS ORDERED, CONSENTED TO AND AGREED, pursuant to the Pollution Control Act, S.C. Code Ann § 48-1-50 (1987) and § 48-1-100 (Supp. 2002), that the Respondent shall:

1. Within sixty (60) days of the execution date of this Consent Order, submit to the Department a Preliminary Engineering Report (PER) addressing upgrade of the WWTF to meet permitted discharge limits.
2. Within ninety (90) days of the Department's approval of the PER, submit to the Department the plans and specifications and an application for a permit to construct addressing upgrade of the WWTF to meet permitted discharge limits.
3. Within ninety (90) days of the issuance of the permit to construct, begin construction of the permitted upgrade to the WWTF.
4. Within two hundred seventy (270) days of the beginning of construction, complete construction of the upgrade to the WWTF and request final operational approval from the Department. In order to comply with the Reliability Classification I requirements as

specified in Standards for Wastewater Facility Construction, S.C. Code Ann. Regs. 61-67 (Supp. 2002), the Department will allow an additional one hundred eighty (180) days for the Respondent to have the necessary components constructed to meet Reliability Class I requirements as it may relate to the conversion of the lagoon system to other functions.

5. Pay to the Department a civil penalty in the amount of twenty thousand dollars (\$20,000.00), payable in quarterly installments over a period of thirty (30) months, together with interest on the outstanding balance calculated at 8.75% per annum, with the first installment due on May 5, 2003. The Respondent may pay the penalty in full at any time.

IT IS FURTHER ORDERED AND AGREED that where the Department has requested information in connection with the above actions, the Respondent shall respond to such requests in a timely fashion.

THEREFORE IT IS FURTHER AGREED that if any event occurs which causes or may cause a delay in meeting any of the above scheduled dates for completion of any specified activity, the Respondent shall notify the Department in writing at least one (1) week before the scheduled date, describing in detail the anticipated length of the delay, the precise cause or causes of delay, if ascertainable, the measures taken or to be taken to prevent or minimize the delay, and the timetable by which those measures will be implemented.

The Department shall provide written notice as soon as practicable that a specified extension of time has been granted or that no extension has been granted. An extension shall be granted for any scheduled activity delayed by an event of *force majeure*, which shall mean any event arising from causes beyond the control of the Respondent that causes a delay in or prevents the performance of any of the conditions under this Consent Order including, but not limited to: a) acts of God, fire, war, insurrection, civil disturbance, explosion; b) adverse weather condition that could not be

reasonably anticipated causing unusual delay in transportation and/or field work activities; c) restraint by court order or order of public authority; d) inability to obtain, after exercise of reasonable diligence and timely submittal of all applicable applications, any necessary authorizations, approvals, permits, or licenses due to action or inaction of any governmental agency or authority; and e) delays caused by compliance with applicable statutes or regulations governing contracting, procurement or acquisition procedures, despite the exercise of reasonable diligence by the Respondent.

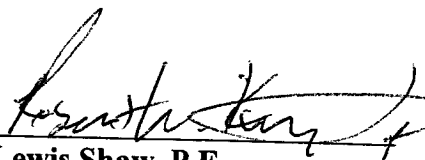
Events which are not *force majeure* include by example, but are not limited to, unanticipated or increased costs of performance, changed economic circumstances, normal precipitation events, or any person's failure to exercise due diligence in obtaining governmental permits or fulfilling contractual duties. Such determination will be made in the sole discretion of the Department. Any extension shall be incorporated by reference as an enforceable part of this Consent Order and thereafter be referred to as an attachment to the Consent Order.

PURSUANT TO THIS ORDER, all communication regarding this Order and its requirements shall be addressed as follows:

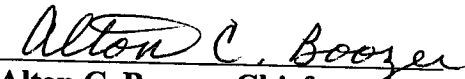
Anastasia Hunter-Shaw
Water Enforcement Division
Bureau of Water
SCDHEC
2600 Bull Street
Columbia, S.C. 29201

IT IS FURTHER ORDERED AND AGREED that failure to comply with any provision of this Order shall be grounds for further enforcement action pursuant to the Pollution Control Act, S.C. Code Ann. § 48-1-330 (1987), to include the assessment of additional civil penalties.

**THE SOUTH CAROLINA DEPARTMENT OF
HEALTH AND ENVIRONMENTAL CONTROL**



R. Lewis Shaw, P.E.,
Deputy Commissioner for EQC

DATE: 4/7/03

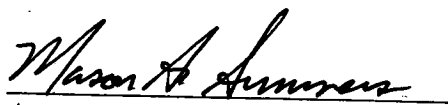

Alton C. Boozer, Chief
Bureau of Water

DATE: 7 April, 2003

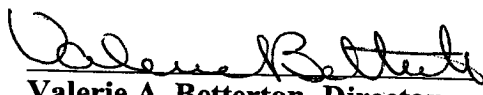
WE CONSENT:


Bush River Utilities, Inc.

DATE: 4/4/03


Mason A. Summers
Attorney for the Department

DATE: 4/4/03


Valerie A. Betterton, Director
Water Enforcement Division

DATE: 4/7/03

EXHIBIT

WJM-6





and Company
Consulting Engineers, Inc.

EXHIBIT WJM-7

Sheet of

Work by:

Checked by:

PROJECT:

Bush River

SUBJECT

Replacement Facility

PROJECT #:

01043

DATE:

1/7/04

| | |
|---------------------------------------|-----------------------|
| 1. FINE SCREEN WITH TANKAGE | 19,650 ⁰⁰ |
| 2. SANITATIVE AERATION EQUIPMENT | 167,465 ⁰⁰ |
| 3. EFFLUENT METERING BOX | 6,300 ⁰⁰ |
| 4. UV SYSTEM WITH TANKAGE | 30,000 ⁰⁰ |
| 5. BLOWERS FOR SLUDGE | 25,874 ⁰⁰ |
| 6. AIR DIFFUSERS FOR SLUDGE | 18,647 ⁰⁰ |
| ✓ 7. EFFLUENT EQUALIZATION BASIN | 193,925 ⁰⁰ |
| ✓ 8. DUAL REACTORS | 257,895 ⁰⁰ |
| ✓ 9. AEROBIC DIGESTER | 92,522 ⁰⁰ |
| 10. INFILTRANT PUMPS WITH CONTROLS | 25,000 ⁰⁰ |
| 11. EFFLUENT PUMPS | 10,000 ⁰⁰ |
| 12. PUMP STATION (STRUCTURE) | 10,000 ⁰⁰ |
| 15. YARD PIPING | 25,000 ⁰⁰ |
| 16. ELECTRICAL | 50,000 ⁰⁰ |
| | <hr/> |
| | 932,278 ⁰⁰ |